

## WHAT IS CLAIMED IS:

1. For use in a telecommunication network, an apparatus for testing a telecommunication device comprising switching fabric including a plurality of voice paths, said telecommunication system comprising:

a test controller connected to receive a test call from an originating terminal, allocate an allocated one of the voice paths within said telecommunication device for the test call and establish a call connection for the test call between the originating terminal and a destination terminal via the allocated voice path and a packet-switched network to test the allocated voice path.

2. The apparatus as set forth in Claim 1 wherein the voice paths comprise time division multiplexed (TDM) switched circuits.

3. The apparatus as set forth in Claim 1 wherein the originating terminal and the destination terminal are Session Initiation Protocol (SIP) phones.

4. The apparatus as set forth in Claim 3 wherein said test controller is configured to receive a signaling message for the test call from the originating terminal, the signaling message being addressed to an Internet Protocol (IP) address of said test controller.

5. The apparatus as set forth in Claim 4 wherein the signaling message is an INVITE message.

6. The apparatus as set forth in Claim 4 wherein said test controller is configured to send a signaling message to an IP address of the destination terminal.

7. The apparatus as set forth in Claim 1 wherein said test controller is configured to send a signaling message to a device controller within said telecommunication device, said device controller allocating the allocated voice path.

8. The apparatus as set forth in Claim 1 wherein the at least one allocated voice path provides a connection to a media gateway for converting between circuit-switched voice and packet-switched voice.

9. A telecommunication system for testing a telecommunication device comprising switching fabric including a plurality of voice paths, said telecommunication system comprising:

a test controller connected to receive a test call from an originating terminal, allocate an allocated one of the voice paths within said telecommunication device for the test call and establish a call connection for the test call between the originating terminal and a destination terminal via the allocated voice path and a packet-switched network to test the allocated voice path.

10. The telecommunication system as set forth in Claim 9 wherein the voice paths comprise time division multiplexed (TDM) switched circuits.

11. The telecommunication system as set forth in Claim 9, further comprising:

a media gateway connected to said telecommunication device and the packet-switched network to convert between circuit-switched voice transmitted by said telecommunication device and packet-switched voice transmitted over the packet-switched network, the allocated voice path being connected to said media gateway for the test call.

12. The telecommunications system as set forth in Claim 9, wherein said telecommunication device comprises:

switching fabric including a plurality of voice circuits for switching voice calls; and

a controller operable to receive a signaling message from said test controller to establish the call connection for the test call through the packet-switched network, said controller being further operable to allocate at least one allocated one of the voice circuits for the test call to test the at least one allocated voice circuit.

13. The telecommunication system as set forth in Claim 9 wherein the originating terminal and the destination terminal are Session Initiation Protocol (SIP) phones.

14. The telecommunication system as set forth in Claim 13 wherein said test controller is configured to receive a signaling message for the test call from the originating terminal, the signaling message being addressed to an Internet Protocol (IP) address of said test controller.

15. The telecommunication system as set forth in Claim 14 wherein the signaling message is an INVITE message.

16. The telecommunication system as set forth in Claim 14 wherein said test controller is configured to send a signaling message to an IP address of the destination terminal.

17. The telecommunication system as set forth in Claim 9 wherein said test controller is configured to send a signaling message to a device controller within said telecommunication device, said device controller allocating the allocated voice path.

18. The telecommunication system as set forth in Claim 9 wherein said telecommunication device is a switch.

19. The telecommunication system as set forth in Claim 18 wherein said switch is a mobile switching center.

20. For use in a telecommunication system comprising a telecommunication device, said telecommunication device comprising switching fabric including a plurality of voice paths, a method of testing the voice paths in said telecommunication device, the method comprising the steps of:

receiving a signaling message for a test call from an originating terminal;

sending a signaling message to the telecommunication device to allocate an allocated one of the voice paths for the test call in the telecommunication device;

establishing a connection between the originating terminal and a destination terminal for the test call through a packet-switched network using the allocated voice path; and

testing the allocated voice path during the test call.

21. The method as set forth in Claim 20 further comprising the step of converting between circuit-switched voice transmitted by said telecommunication device and packet-switched voice transmitted over the packet-switched network.



22. The method as set forth in Claim 20 wherein said step of receiving further comprises receiving the signaling message addressed to an Internet Protocol (IP) address of a test controller.

23. The method as set forth in Claim 22 wherein the signaling message is a Session Initiation Protocol (SIP) INVITE message.

24. The method as set forth in Claim 22 wherein said establishing further comprises sending a signaling message from the test controller to an IP address of the destination terminal.